Oregon **Grade 7**

FlyBy Math™ Alignment to
Mathematics Grade-Level Standards
Adopted April 2002

Calculations and Estimations

Common Curriculum Goal (CCG): Numbers:
Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

Grade-Level Standards	***FlyBy Math™* Activities**
M.07.1.A.1(3) Use rates, ratios, and percents to solve problems.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

Statistics and Probability

CCG: Collect and Display Data:
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Grade-Level Standards	***FlyBy Math™* Activities**
M.07.2.C.1(1) Formulate questions and design experiments or surveys to collect relevant data.	--Conduct simulation and measurement for several aircraft conflict problems.
M.07.2.C.1(4) Represent and interpret data using frequency distribution tables, box-and whisker-plots, stem-and-leaf plots, and single- and multiple- line graphs.	--Represent distance, rate, and time data using tables, line plots, bar graphs, and line graphs.
M.07.2.C.1(5) Determine the graphical representation of a set of data that best shows key characteristics of the data.	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

Algebraic Relationships

CCG: Patterns and Functions:
Understand patterns, relations, and functions.

Grade-Level Standards	***FlyBy Math™* Activities**
M.07.3.A.1(1) Represent, analyze and determine rules for finding patterns involving integers with tables, graphs, words, and when possible, symbolic rules.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system. --Use tables, bar graphs, line graphs, equations, and a Cartesian coordinate system to draw conclusions.

CCG: Algebraic Relationships:
Represent and analyze mathematical situations and structures using algebraic symbols.

Grade-Level Standards	***FlyBy Math™* Activities**
M.07.3.B.1(1) Algebraically represent situations and solve problems involving linear equations and inequalities.	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.

M.07.3.B.1(2) Evaluate algebraic expressions and formulas by substituting integers.	--Use the distance-rate-time formula to predict and analyze aircraft conflicts.
M.07.3.B.1(3) Interpret algebraic relationships represented by two-column tables, number lines and coordinate graphs (four quadrants).	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
M.07.3.B.1(4) Graph linear equations on a coordinate grid by making a table using integer coordinates.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.
CCG: Modeling: Use mathematical models to represent and understand quantitative relationships.	
Grade-Level Standards	***FlyBy Math™* Activities**
M.07.3.C.1(1) Model situations, make predictions and inferences, and solve problems using linear equations.	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system. --Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
M.07.3.C.1(3) Identify and sketch a graph that models a given situation.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.
CCG: Change: Analyze change in various contexts.	
Grade-Level Standards	***FlyBy Math™* Activities**
M.07.3.D.1(1) Identify and describe how a change in one variable relates to a change in a second variable.	--Interpret the slope of a line in the context of a distance-rate-time problem.

Mathematical Problem Solving

CCG: Conceptual Understanding: Select, apply, and translate among mathematical representations to solve problems.	
Grade-Level Standards	***FlyBy Math™* Activities**
M.07.6.A.1(1) Interpret the concepts of a problem-solving task and translate them into mathematics.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
CCG: Processes and Strategies: Apply and adapt a variety of appropriate strategies to solve problems.	
Grade-Level Standards	***FlyBy Math™* Activities**
M.07.6.B.1(1) Choose strategies that can work and then carry out the strategies chosen.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

CCG: Communication: Communicate mathematical thinking coherently and clearly. Use the language of mathematics to express mathematical ideas precisely.	
Grade-Level Standards	***FlyBy Math™* Activities**
M.07.6.D.1(1) Use pictures, symbols, and/or vocabulary to convey the path to the identified solution.	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
CCG: Accuracy: Accurately solve problems that arise in mathematics and other contexts.	
Grade-Level Standards	***FlyBy Math™* Activities**
M.07.6.E.1(1) Accurately solve problems using mathematics.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.